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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/601,102

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Kenneth J. Balkus JR.

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P.O. BOX 50784
DALLAS, TX 75201

EXAMINER

GRAY, JILL M

ART UNIT

PAPER NUMBER

1794

MAIL DATE

DELIVERY MODE

04/29/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/601,102	Applicant(s) BALKUS ET AL.	
	Examiner Jill Gray	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 January 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4-6,9,31 and 34-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4-6,9,31 and 34-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

The rejection of claims 1, 4-6, 9, 31, and 35-36 under 35 U.S.C. 112, first paragraph has been withdrawn upon further consideration.

The rejection of claims 1, 4-6, 9, and 35-36 under 35 U.S.C. 102(e) as anticipated by or, or in the alternative, under 35 U.S.C. 103(a) as obvious over Martin is withdrawn in view of applicants' amendments.

The rejection of claims 1, 5-6, 9, and 35-36 under 35 U.S.C. 102(e) as anticipated by or, or in the alternative, under 35 U.S.C. 103(a) as obvious over Simpson et al., US 2004/0037813 A1 or Layman et al., US 2003/0215624 A1 is withdrawn in view of applicants' amendments.

The rejection of claims 1, 4-6, 9, and 35-36 under 35 U.S.C. 102(e) as anticipated by or, or in the alternative, under 35 U.S.C. 103(a) as obvious over Senecal et al., 6,800,155 B2 is withdrawn in view of applicants' amendments.

The rejection of claims 1 and 5-6 under 35 U.S.C. 102(e) as anticipated by or, or in the alternative, under 35 U.S.C. 103(a) as obvious over Ignatious et al., US 2003/0017208 A1 is withdrawn in view of applicants' amendments.

Claim Rejections - 35 USC § 102

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 4-6, 9, and 35-36 are rejected under 35 U.S.C. 102(b) as being anticipated by PCT Publication WO 98/24724 (hereinafter the publication).

The publication discloses a fiber and fiber network, wherein said fiber consists of a mesoporous molecular sieve, and the mesoporous molecular sieve consists of an organosilane, a surfactant, an acid, an alcohol and water, as required by present claims 1 and 6. See entire document and in particular, Example 6. It should be noted that the language of "produced by electrospinning" in present claim 6 is a process limitation in a product claim, wherein patentability is based solely upon the product itself. It is the product that must be distinguished from the prior art product. Hence, this requirement is not germane. Regarding claims 4 and 9, the publication discloses organosilanes of the type contemplated by applicants. See page 13, lines 17-25. As to claims 35-36, the publication discloses that hydrochloric acid and ethanol can be used. Note Example 6. Regarding claim 5, the publication discloses a fiber diameter within the present claimed range. See Example 6.

Therefore, the teachings of the publication anticipate the invention as claimed in present claims 1, 4-6, 9, and 35-36.

Claim Rejections - 35 USC § 103

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 31 and 34 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Martin 4,127,706 or Martin et al., 4,043,331 (both referred to collectively as Martin, and both for reasons of record).

Martin teaches a network of fibers produced from a conducting solution, wherein said solution comprises a precursor material and surfactant, per claims 31 and 34-36. See column 1, lines 13-15 and column 8, line 68. In addition, Martin teaches that the fiber diameter is within applicants' range as required by claim 5. See Example 3. Also, Martin teaches that a metal oxide of the type contemplated by applicants in claim 4 can be included. See column 8, lines 48-52. Applicants' amendment incorporating the language wherein the mesoporous molecular sieve "consists of" in claim 31 has been noted. However, the open-ended language of "a method of making a network of fibers comprising" and "wherein said mixture contains" does not exclude other components.

Therefore, the teachings of Martin anticipate or in the alternative render obvious the invention as claimed in present claims 31 and 34.

5. Claims 31 and 34 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Simpson et al US 2004/0037813 A1 (Simpson) or Layman et al, US 2003/0215624A1 (Layman) for reasons of record.

Simpson and Layman each teach a method of producing electrospun fibers from a conducting solution comprising a precursor material and surfactant, per claims 31 and 34. See Simpson, page 6, [0079] and Layman, abstract and page 4, [0043]. As to the diameter set forth in claim 5, Simpson and Layman each teach diameters within applicants' claimed range. See Simpson, claim 10 and Layman, page 1, [0003]. Applicants' amendment incorporating the language in claim 31 wherein the mesoporous molecular sieve "consists of" has been noted. However, the open-ended language of "a

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method of making a network of fibers comprising” and “wherein said mixture contains” does not exclude other components.

Therefore, the prior art references of Simpson and Layman anticipate the invention of claims 31 and 34.

6. Claims 31 and 34 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Senecal et al., 6,800,155 B2 (Senecal) for reasons of record.

Senecal teaches a method of producing a network of fibers (claim 31) comprising at least one mesoporous precursor material of the type contemplated by applicants in claim 34. See abstract and column 5, line 46 through column 6, line 2. In addition the fibers have a diameter within applicant's range as required by claim 5. See column 4, lines 50-51. Applicants' amendment incorporating the language wherein the mesoporous molecular sieve "consists of" in claim 31 has been noted. However, the open-ended language of “a method of making a network of fibers comprising” and “wherein said mixture contains” does not exclude other components.

Therefore, the prior art teachings of Senecal anticipate the invention as claimed in present claims 31 and 34.

7. Claim 31 is rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Ignatious et al., US 2003/0017208 A1 (Ignatious), for reasons of record.

Ignatious teaches method of forming a network of fibers (claim 31) comprising a fiber forming material. The fiber forming material is selected from materials capable of

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being used to form molecular sieves, and more specifically, mesoporous materials.

Note [0054], [0055 and [0058]. Also, the fiber diameter is within applicants' range as required by claim 5. See [0031]. Applicants' amendment incorporating the language wherein the mesoporous molecular sieve "consists of" in claim 31 has been noted.

However, the open-ended language of "a method of making a network of fibers comprising" and "wherein said mixture contains" does not exclude other components.

Therefore the teachings of Ignatious anticipated the invention as claimed in present claim 31.

8. Claims 31 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over PCT Publication WO 98/24724 (hereinafter the publication) in view of Martin 4,127,706 or Martin et al., 4,043,331 (both referred to collectively as Martin, and both for reasons of record) or Senecal et al, 6,800,155 B2.

The publication is as set forth above and teaches a fiber and network of fibers that consist of a mesoporous molecular sieve, wherein the mesoporous molecular sieve consists of an organosilane, a surfactant, an acid, an alcohol and water, but does not teach electrospinning the mixture to form fibers.

Martin and Senecal each teach the formation of small diameter fiber having high surface area and lightweight using an electrospinning process.

It would have been obvious to one having ordinary skill in the art to modify the teachings of the Publication by forming a fiber, wherein the fiber forming process is an electrospinning process as taught by Martin or Senecal, so as to form mesoporous silica

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molecular sieve fibers of small diameter that have a high surface area and are lightweight.

Therefore, the combined teachings of the publication, Martin and Senecal would have rendered obvious the invention as claimed in present claims 31 and 34.

Response to Arguments

9. Applicant's arguments with respect to claims 1, 4-6, 9, 31, 34-36 have been considered but are moot in view of the new ground(s) of rejection.

No claims are allowed.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jill Gray whose telephone number is 571-272-1524.

The examiner can normally be reached on M-Th and alternate Fridays 8:00-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Keith Hendricks can be reached on 571-272-1401. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jill Gray/
Primary Examiner
Art Unit 1794

jmg